

CLAIMS

1. An amino acid sequence comprising the sequence presented as SEQ ID No. 1 or a variant, homologue, fragment or derivative thereof.

2. A nucleotide sequence encoding the amino acid sequence as defined in claim 1.

3. A nucleotide sequence comprising the sequence presented as SEQ ID No. 2 or a variant, homologue, fragment or derivative thereof.

4. A nucleotide sequence that is capable of hybridising to the nucleotide sequence according to claim 3.

5. A nucleotide sequence that is capable of hybridising to the nucleotide sequence according to claim 4.

6. A vector comprising the nucleotide sequence according to any one of claims 2 to 5.

7. A host cell into which has been incorporated the nucleotide sequence according to any one of claims 2 to 6.

8. An assay method for identifying an agent that can affect PDE1B2 activity or expression, the assay method comprising

contacting an agent with an amino acid according to claim 1 or a nucleotide sequence according to any one of claims 2 to 7; and

measuring the activity or expression of PDE1B2 ;

wherein a difference between a) PDE activity or expression in the absence of the agent and b) PDE activity or expression in the presence of the agent is indicative that the agent can affect PDE1B2 activity or expression.

9. An assay method according to claim 8 wherein the assay is to screen for agents useful in the treatment of a cardiovascular disorder, a GI disorder, and/or disorders found in any one or more of the cardiovascular system, the GI system, spleen.

10. A process comprising the steps of:

- (a) performing the assay according to claim 8 or claim 9;
- (b) identifying one or more agents that do affect PDE1B2 activity or expression; and
- (c) preparing a quantity of those one or more identified agents.

11. A method of affecting *in vivo* PDE1B2 activity or expression with an agent;

wherein the agent is capable of affecting PDE1B2 activity or expression in an *in vitro* assay method;

wherein the *in vitro* assay method is the assay method defined in claim 8 or claim 9.

12. Use of an agent in the preparation of a pharmaceutical composition for the treatment of a disease or condition associated with PDE1B2, the agent is capable of having an effect on the activity or expression of PDE when assayed *in vitro* by the assay method according to claim 8 or claim 9.

13. An enzyme capable of having an immunological reaction with an antibody raised against PDE1B2.

14. A nucleotide sequence coding for a PDE, wherein the nucleotide sequence is obtainable from NCIMB 41026.

15. A PDE wherein the PDE is expressable from a nucleotide sequence obtainable from NCIMB 41026.

16. Use of an agent which has an effect on the activity of PDE1B2 or the expression thereof in the preparation of a pharmaceutical composition for the treatment of a disease or condition associated with PDE1B2.

17. Use of a PDE1B2 gene and/or expression product thereof in the preparation of a medicament for the treatment and/or modulation of disturbances associated with an imbalance or disturbance of PDE1B2.

18. Use according to claim 17 wherein the PDE1B2 and/or expression product thereof is used to screen for agents that can modulate the activity of the PDE1B2 and/or expression product thereof.

5

19. A PDE1B2 agonist wherein the PDE1B2 is as defined in claim 1 or is the nucleotide sequence coding for same.

20. A PDE1B2 antagonist wherein the PDE1B2 is as defined in claim 1 or is the nucleotide sequence coding for same.

10

21. A recombinant PDE1B2 enzyme.

22. A recombinant nucleotide sequence encoding a PDE1B2 enzyme.

15

23. A PDE1B2 enzyme substantially as described herein.